

Economic Growth, Debt, and Fiscal Adjustment: Barbados' Tripartite Challenge

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Country Department Caribbean
Group

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Inter-American Development Bank

Abstract

Economic growth, public debt, and the government's fiscal balance are strongly intertwined. In Barbados, low growth and recurring fiscal deficits have led to rapid accumulation of debt, which at over 155 percent of GDP in 2017 and the first half of 2018, has been the highest in the Latin American and Caribbean region. In response, the Government of Barbados is carrying out a set of ambitious reforms, including a fiscal consolidation program and debt restructuring. Yet, given the important role of economic growth on the required fiscal adjustment and on the debt-to-GDP ratio, it will be key to ensure that the design and scope of the adjustment support a balanced approach, reducing debt without undermining growth. This paper reviews and explains the recent debt trajectory in Barbados. It then discusses the potential effects of real GDP growth on the debt-to-GDP ratio and the required fiscal adjustment going forward. In so doing, it highlights the importance of a balanced approach between fiscal adjustment and growth stimulus for a sustainable debt path.

JEL Codes: E62, F43, H63, H68

Key Words: growth, debt, fiscal balance, Barbados, economic development, debt sustainability, fiscal adjustment, policy

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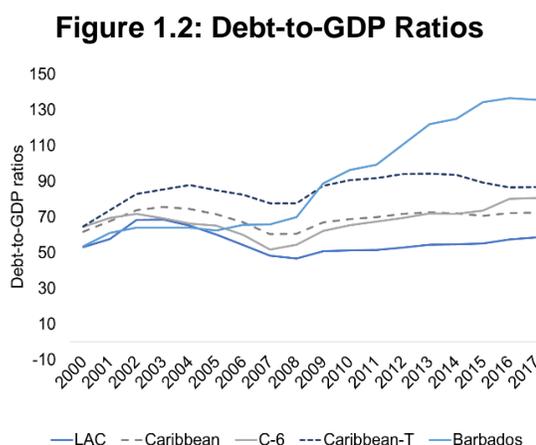
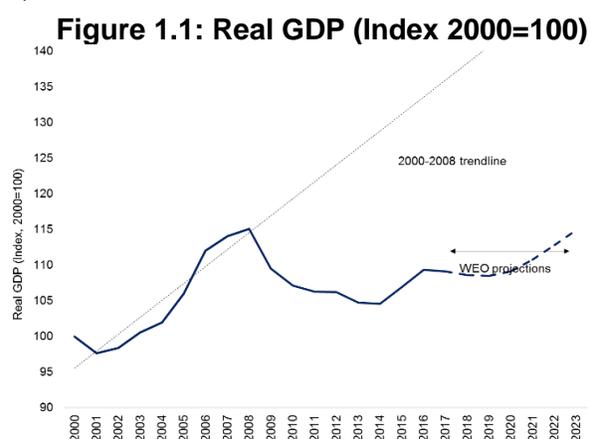
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1. Introduction¹

Barbados has experienced slow economic growth for the past two decades. As seen in Figure 1.1, the effects of the 2008 global financial crisis further subdued the growth trajectory, accentuating the effect of inherent structural constraints to the Barbadian economy, including low diversification, a small market size and a high dependence on imports. Hand in hand with low growth, the Government of Barbados has sustained recurring fiscal deficits for the past 20 years, as well as primary fiscal deficits between FY2007/08 and FY2015/16. Insufficient government financing has been met by borrowing, which resulted in the debt-to-GDP ratio soaring to over 155 percent of GDP in 2017, the highest level in the Latin America and Caribbean (LAC) region (Figure 1.2).²



Source: IMF World Economic Outlook, October 2018.

In response to these trends, the government has been implementing fiscal consolidation reforms since 2013, including increases in revenues³ and cuts to expenditures. However, reforms were insufficient to stabilize the debt.⁴ The current administration, which came into office in May 2018, has taken a proactive approach to the required economic reforms, setting a debt target of 60 percent of GDP by 2033, developing the Barbados Economic Reform and Transformation program (BERT), and entering into an Extended Funding Facility with the International Monetary Fund (IMF). The new set of reforms are ambitious and will be instrumental to stabilize debt. A key remaining challenge will be leading the economy back to a long-term growth path (see Amo-Yartey et al., 2012; C. Tsibouris et al., 2006).

This paper explores the relationship between growth, fiscal adjustment, and debt for the case of Barbados, following Schmid and Malcolm (2016). We first shed light on the main factors that contributed to the debt buildup. Section 2 summarizes the empirical literature on the relationship

¹ All figures used in this paper are based on available data up to December 2018.

² This figure measures the debt-to-GDP ratio at the end of June 2018. It includes general government debt, arrears, and contingent liabilities and excludes SDRs.

³ Revenue measures included the introduction of the NSRL at a rate of 2 percent (introduced in the 2016 Budget) which was subsequently increased to 10 percent (this tax was repealed in July 2018), financial institutions asset tax, a 2 percent commission on foreign exchange transactions, and an increase in the excise tax on gasoline and diesel fuel, among others.

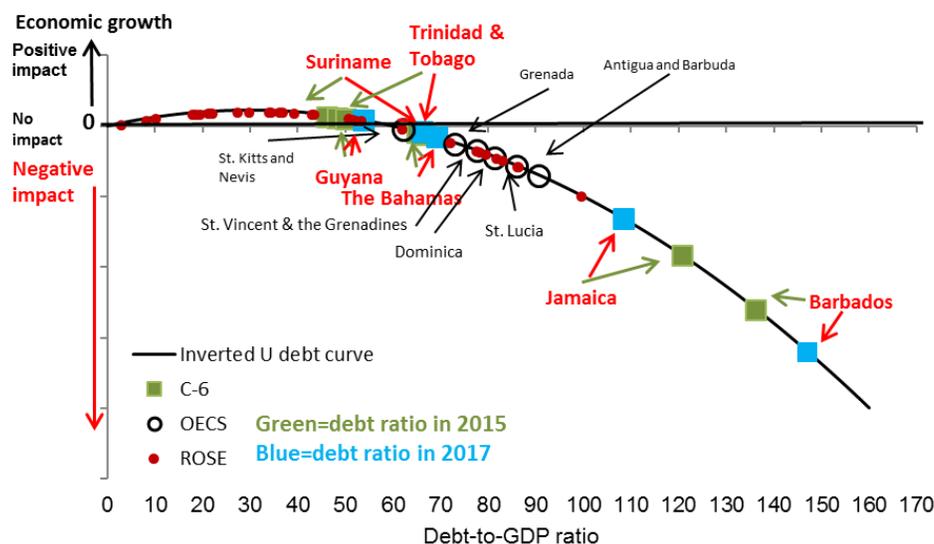
⁴ Revenues increased from 24.9 percent of GDP in FY2013/14 to 28.4 percent of GDP in FY2017/18, but expenditures remain higher, falling from 35.2 percent of GDP in FY2013/14 to 32.7 percent in FY2017/18.

between growth, fiscal adjustment and debt. Section 3 presents summary statistics. Section 4 analyzes the structure and key drivers of debt in Barbados. Section 5 presents the dynamics of debt and the required primary fiscal balance in response to variations in the real GDP growth rate. Section 6 concludes.

2. Literature Review

The relation between debt and economic growth is widely evidenced in the literature. On the one hand, growth affects the level of debt. Higher growth lowers debt levels, as it directly reduces the debt-to-GDP ratio and can indirectly improve the government’s fiscal stance by broadening the tax base, while low growth can make the process of reducing debt more difficult. On the other hand, debt also affects growth as debt beyond a certain threshold negatively impacts growth (Greenidge et al., 2012). Others argue that it is the increasing debt trajectory which negatively impacts growth. In a study focused on the Caribbean region, Greenidge et al. (2012) find that below 30 percent of GDP, higher debt-to-GDP levels have a positive effect on growth. This positive effect diminishes until approximately a 55-56 percent threshold, and beyond 55-56 percent of GDP, debt has a negative impact on growth (Figure 2.1) (Greenidge et al., 2012). For Barbados, Wright and Grenade (2014) estimated a 1.02 percentage point loss of annual real GDP per capita growth for every 1 percent increase in the debt-to-GDP ratio, above a threshold of 61 percent of GDP.⁵

Figure 2.1: Debt-to-GDP Ratio and Economic Growth, 2015 and 2017⁵



Source: Authors’ calculations based on the International Monetary Fund, World Economic Outlook, April 2017.

International evidence shows that countries have used a range of options to reduce debt levels, including fiscal consolidation, reforms of state-owned enterprises, privatization of government assets, and debt restructuring, among others (IMF, 2003). Yet the key policy tools generally used

⁵ This panel includes Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago. The loss in real per capita GDP stemming from the influence of debt variables is estimated from the coefficients in long-run sustainable equations for each economy. Thus estimating losses in real per capita GDP growth once the debt/GDP threshold is reached.

in heavily indebted countries are fiscal consolidation and growth-enhancing reforms (Sahay, 2005; Greenidge et al., 2012; Greenidge, Drakes, and Craigwell, 2010). For instance, in Amo-Yartey et al.'s (2012) review of 206 episodes of large debt reductions globally, the majority of these cases (52 percent) used fiscal consolidation or higher GDP growth to reduce debt-to-GDP ratios; 48 percent implemented debt restructuring measures or defaulted.⁶

Although fiscal adjustment is the most widely used measure to reduce debt levels, its effects vary depending on the design and the scale of the reforms. Successful debt reductions, with favorable macroeconomic impacts, are mainly driven by decisive, gradual, and lasting efforts to reduce government expenditure (Amo-Yartey et al., 2012; C. Tsibouris et al., 2006) found that sustained successful fiscal adjustments relied on cuts to current spending, predominantly wages and subsidies, rather than reductions in growth-enhancing capital spending. This view was supported by Végh, et al. (2018), who argue that fiscal adjustments in LAC countries should focus on current spending reductions, excluding cuts to social transfers or cuts to public investment, as they are essential to protect the vulnerable and promote medium-term growth.

Fiscal consolidation can also reduce growth in the short run, which could potentially offset the planned effects of fiscal adjustment. Debt-reducing measures are generally set based on debt-to-GDP ratio targets, which ultimately depend on the evolution of GDP over time (IMF, 2014). Lower GDP growth could thus trigger further fiscal tightening, which would have additional negative effects on growth and could eventually lead to a spiraling, unsustainable effect (Eyraud and Weber, 2013). Fiscal adjustment therefore must not impede, but rather should encourage, economic growth so that growth's debt reducing effects are felt, and the size of the required fiscal adjustment is eventually reduced as debt stabilizes (Baldacci, Gupta, and Mulas-Granados, 2013). Growth measures complimenting well-designed fiscal adjustment programs are thus essential to ensure that operational debt targets are met (Baldacci, Gupta, and Mulas-Granados, 2013).

3. Low Growth, Rising Debt, and Barbados's Fiscal Reform

Economic growth in Barbados has been weak, particularly since the 2008 financial crisis (see Figure 3.1a). As seen in Table 3.1, the real GDP growth rate fell from an average of 1.4 percent of GDP between 2000 and 2009, to 0 percent between 2010 and 2017 (compared to 1.0 percent and 2.6 percent average growth in LAC countries, respectively, for the same period). Hand in hand with low growth, the government has been running recurring fiscal deficits (Figure 3.1b). The fiscal balance deteriorated during the aftermath of the 2008 financial crisis, reaching a record low of -10.2 percent in FY2013/14 (-3.7 percent primary deficit), subsequently improving as a result of fiscal adjustment measures to reach -4.3 percent (3.3 percent primary surplus) in FY2017/18.

⁶ This review includes cases where debt was reduced by over 15 percent in five years, dropping cases where the level remained above the amount three years prior. Although default is enumerated as one of the policy options to reduce debt, it is highly discouraged due to its negative externalities on investor confidence and the sustainability of the financial sector.

Figure 3.1a: Real GDP Growth, Barbados

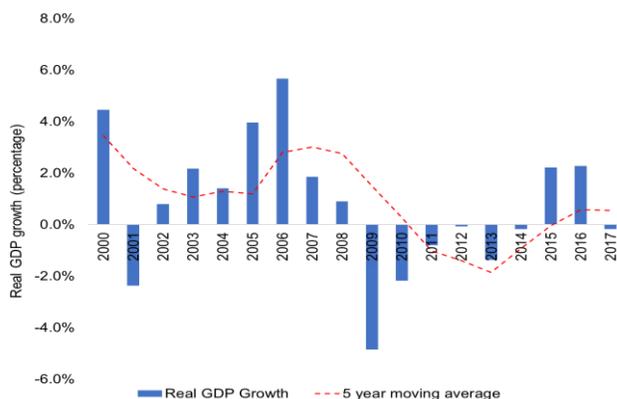


Figure 3.1b: Fiscal and Primary Fiscal Balances, Barbados

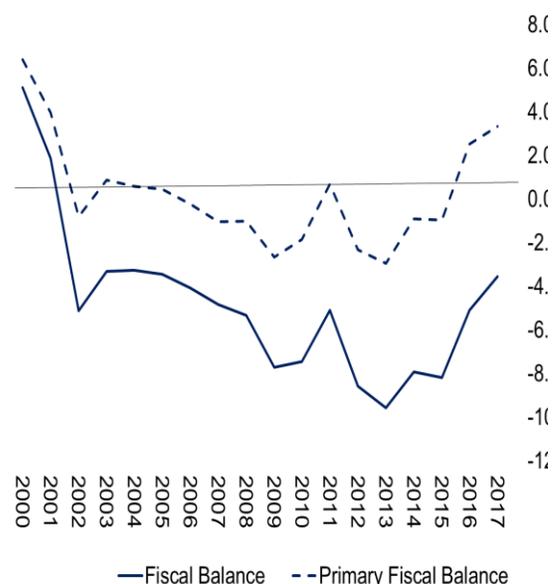


Table 3.1: Real GDP Growth

	2000-2009	2010-2017	Total 2000-2017
Barbados	1.4%	0.0%	0.8%
Caribbean	2.7%	1.0%	1.9%
LAC	3.2%	2.6%	2.9%

Sources: Central Bank of Barbados and IMF WEO, October 2018.

The combination of low growth and recurring fiscal deficits resulted in a debt-driven public sector financing strategy.⁷ The debt-to-GDP ratio in Barbados grew from 61.3 percent of GDP in 2000 to 157.3 percent of GDP in 2017 (see Figure 3.2a). As seen in Figure 3.2a, domestic debt has driven most of this rise. In 2017, approximately 82 percent of general government debt was domestic (US\$6.5 billion), representing a marked increase compared to 2000, when domestic debt stood at 68.8 percent of general government debt (US\$1.3 billion). The share of short-term domestic debt (treasury bills) has also been rising in the past few years, almost doubling from 24 percent of total domestic debt in 2000 to 40 percent by 2017 (see Figure 3.2b).⁸

⁷ The debt-to-GDP growth rate was 6 times faster in Barbados than in the LAC and C-6 regions between 2000 and 2017 (see Figure 1.2). Domestic debt is currently approximately 80 percent of total debt levels. C-6 countries include Barbados, The Bahamas, Guyana, Jamaica, Suriname, and Trinidad and Tobago.

⁸ In comparison, long-term domestic debt (saving bonds and debentures) have been on a declining trend, reaching 60 percent of total domestic debt at the end of 2017, compared with 79 percent in 2010 (see Figure 3.2b). The figures for domestic debt exclude contingent liabilities and arrears.

Figure 3.2a: General Government Debt (percent of GDP)

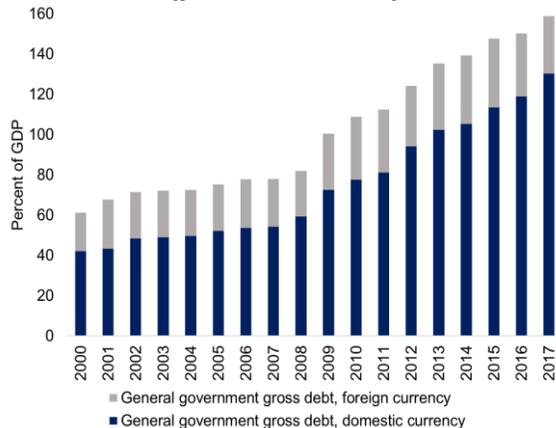
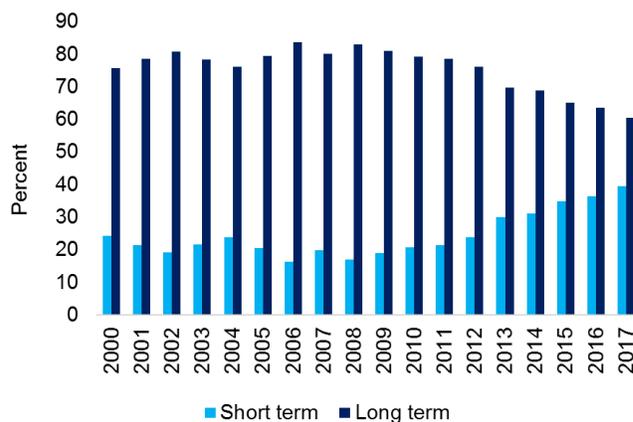


Figure 3.2b: Short-term and Long-term Domestic Debt (percent of total domestic debt)



Sources: IMF World Economic Outlook, October 2018 and Central Bank of Barbados.

The growth, fiscal, and debt dynamics described in the previous paragraph have taken a toll on the Barbadian economy through several channels. First, a historical negative current account balance, fueled by recurring fiscal deficits, has resulted in a steady drawdown of international reserves, which reached 7.4 weeks of imports (US\$288.6 million) at the end of September 2018. This is a concern, given the need for reserves to maintain the exchange rate peg (BBD\$2=US\$1) and to pay for key imported goods, such as fuel and food (which combined accounted for 40 percent of imports and 12.8 percent of GDP between 2012 and 2016).⁹ Second, high debt levels pose a substantial financial burden on the government. Debt servicing costs increased from 1.2 percent of GDP in 2000 to 3.0 percent of GDP in 2017, and interest payments reached 7.6 percent of GDP in FY2017/18, which is almost as much as government spending on salaries and wages (at 7.8 percent of GDP in FY2017/18). Third, rapidly rising debt and the 2018 halt to payments to external creditors have undermined investor confidence, as seen by sovereign credit rating agencies' continued credit downgrades throughout 2018.¹⁰ Finally, the higher proportion of domestic debt, specifically short-term domestic debt, has increased risks to the government's financing strategy by, among other things, increasing the exposure of the portfolio to rollover risks.

Consequently, the government has committed to addressing these challenges through a comprehensive set of economic reforms, with a debt target of 60 percent of GDP by FY2033/34 (with intermediate targets of 115 percent by 2023 and 80 percent by FY2027/28).¹¹ As laid out in BERT, the reform program includes (i) front-loaded fiscal consolidation measures, aiming for a primary fiscal balance target of 6 percent of GDP by FY2019/20; (ii) comprehensive debt restructuring, including both domestic and external debt; (iii) economic reform measures to reduce central bank financing of the government; and (iv) growth-enhancing policies, including investing on a high-skilled, knowledge-based economy; providing better channels for local savings for

⁹ As a rule of thumb, a country with a fixed exchange rate should have international reserve levels of at least three months of imports.

¹⁰ It must be noted however, that these ratings improved in the last months of 2018, following a drop to 'selective default' with the default on external debt; and as a result of the domestic debt restructuring agreement reached in October 2018.

¹¹ These debt targets are those presented in the September 2018 IMF Extended Fund Facility (EFF) document.

investment; using all assets and easing fiscal leavers that constrain growth; addressing the cost and ease of doing business; and diversifying the economy. However, as will be discussed in subsequent sections, ensuring a balanced approach between fiscal consolidation and growth promotion will be key to putting the economy back on a sustainable path.

4. The Drivers of Debt in Barbados

The law of motion of debt (equation 1), shows the factors that drive the evolution of the debt-to-GDP ratio over time. Based on this equation, the debt-to-GDP ratio depends on the following factors: interest rates, the primary balance, valuation effects of exchange rate fluctuations, real GDP growth rate, and inflation.¹² Based on equation 1, higher interest rates, an exchange rate depreciation, and a lower primary surplus contribute to increasing the debt-to-GDP ratio, whereas higher growth and inflation can lead to reductions in the debt-to-GDP ratio.

$$d_t = \left[\alpha \frac{1+i_t^d}{(1+g_t)(1+\pi_t)} + (1-\alpha) \frac{(1+i_t^f)(1+\Delta e_t)}{(1+g_t)(1+\pi_t)} \right] d_{t-1} - ps_t \quad (1)$$

Figure 4.1 breaks down the cumulative effect of these variables on Barbados’s debt-to-GDP ratio for five-year intervals since 2000. The relation between the key variables of interest for the law of motion of debt are in line with the patterns described in the literature review. On the one hand, higher GDP growth, elevated inflation, and higher primary fiscal surpluses have contributed to declines in growth of the debt-to-GDP ratio (Amo-Yartey et al., 2012; IMF, 2003). On the other hand, a rise in debt servicing costs, as measures by the interest rate payments, have fueled debt-to-GDP ratios.

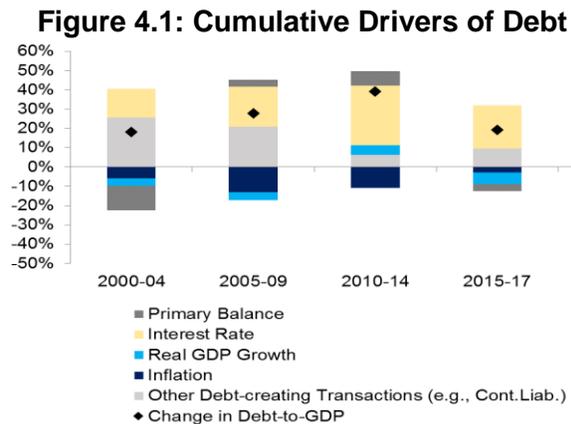


Table 4.1: Selected Indicators

	Change in the debt to GDP ratio	Growth of short term domestic debt (T-bills)	Average interest payments (percent of GDP)	Average primary surplus (percent of GDP)	Average real GDP growth	Average inflation rate
2000-04	3.4	4.5	3.0	2.5	1.3	1.7
2005-09	5.9	8.4	4.1	-0.7	1.6	5.8
2010-14	7.8	24.3	6.2	-1.5	-0.9	4.7
2015-17	6.1	17.2	7.4	1.2	1.4	1.6

Sources: IMF World Economic Outlook, October 2018 and Central Bank of Barbados.

¹² d_t is the debt-to-GDP ratio at time t , α is the proportion of total public debt denominated in domestic currency, and $(1-\alpha)$ is the proportion of debt denominated in foreign currency. Δe is the annual percentage change in the exchange rate and i^d , i^f , and g_t are the nominal interest rate of the domestic currency debt, nominal interest rate on foreign currency debt, and the GDP growth rate, respectively. π is the inflation rate. Finally, fb_t is the fiscal balance, and ps_t is the primary fiscal surplus.

Interest payments have been the greatest contributor to debt accumulation in Barbados, increasing from 1.3 percent of GDP in 2000 to almost 8 percent of GDP by the end of 2017. Interest payments are now one of the largest public spending categories and an increasing fiscal burden on the state. During the period of analysis, higher interest payments were mainly the result of higher debt accumulation, as interest rates remained between 5 and 7 percent.¹³ Recurring primary fiscal deficits, averaging 0.7 percent of GDP between 2005 and 2009 and reaching 1.5 percent of GDP between 2010 and 2014, were also a key contributor to the fast rise of the debt-to-GDP ratio until 2014. However, as a consequence of fiscal consolidation, since 2015 Barbados recorded a primary surplus averaging 1.2 percent, which contributed to the reduction in the rise of the debt-to-GDP ratio (see Table 4.1).

Moderate real GDP growth rates since 2000 resulted in a modest debt-reducing effect, which was insufficient to counteract the debt-enhancing effects of interest payments, primary fiscal deficits, and other transactions during the same period. As seen in Table 4.1, the contraction of the economy recorded between 2010 and 2014 (-0.9 percent) contributed positively to the rise of the debt-to-GDP ratio during this period. The residual—which includes debt relief and contingent liabilities—also played a role as a driver of debt-creating flows in Barbados, particularly during 2000-2009, while inflation, in a more modest way, acted as a debt reducing factor, with a more modest effect on debt-to-GDP during periods of low inflation. Following a period of higher inflation between 2005 and 2014, the inflation rate then fell temporarily to -1.1 percent in 2015 and 1.5 percent in 2016 and has since picked up to 4.5 percent recorded at end of 2017.

Therefore, based on the decomposition of the cumulative drivers of the debt-to-GDP ratio presented in Figure 4.1, the combination of low growth, recurring primary fiscal deficits, and high interest payments have been the main contributor to the debt trajectory in Barbados, both during the fast rise of the debt-to-GDP ratio between 2000 and 2014 and during the slowdown of debt accumulation since 2015. Going forward, fiscal consolidation and debt restructuring will be key in reducing the debt-to-GDP ratio by increasing the primary fiscal balance and reducing interest payments, respectively. In addition, GDP growth will also be an important factor in the continued decline of the debt ratio, as will be discussed in the following sections.

5. Economic Growth, the Debt Ratio, and the Required Fiscal Stance

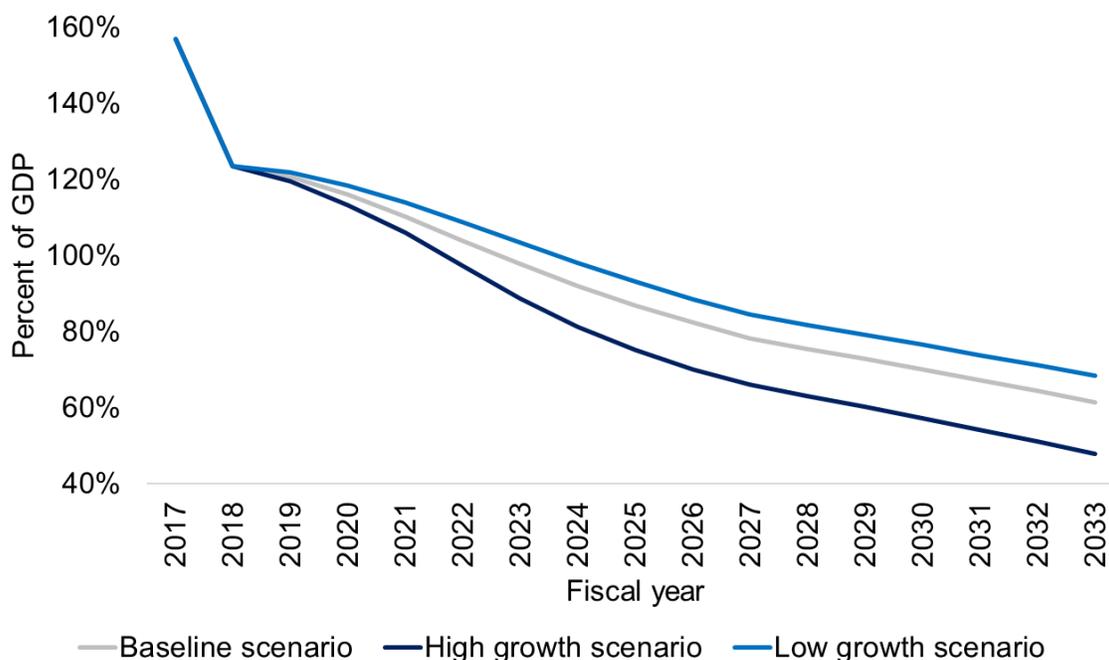
Following the literature review in Section 2 and the debt decomposition presented in Section 4, this section uses equation 1 to simulate the effect of different rates of real GDP growth on the projected debt-to-GDP ratio and on the required fiscal adjustment to reach the government's debt targets. The baseline scenario is built on the IMF's Extended Fund Facility (EFF) agreement, assuming a real GDP growth rate rising for three years from 2019, to a long-run growth rate of 1.8 percent. At the same time, the scenario assumes a primary fiscal surplus of 6 percent for the five-year period until FY2024/25.

Two additional scenarios are built into the simulations based on varying real GDP growth rates. The high-growth scenario assumes an average growth of 2.7 percent for a five-year period

¹³ These figures represent the implicit interest rates, based on the interest payments made in the current period and the previous stock of debt.

starting in 2019, following a comparable growth pattern that was observed in Barbados after the IMF program in 1992.¹⁴ The low-growth scenario is based on the Central Bank of Barbados's forecasted contraction of 0.5 percent for 2018 and assumes a contraction of 1 percent for 2019, which slowly increases to reach a long-term growth rate of 1.8 percent.

Figure 5.1: Debt-to-GDP Ratio Projections



Source: IDB estimates based on data from the Central Bank of Barbados and WEO, IMF April 2018.

Under the baseline scenario, the debt-to-GDP ratio falls in FY2018/19 as a result of the debt restructuring¹⁵ and is continuing to decline to 75 percent by FY2027/28 and 61 percent of GDP by FY2033/34, in line with the government's fiscal targets. These outcomes are both the result of the decline in the debt-to-GDP ratio, due to the debt exchange, as well as the increase in the primary fiscal surplus to 6 percent in FY2019/20. However, varying rates of economic growth will have an impact on the debt-to-GDP ratio. As seen in Figures 5.2a and 5.2b, negative deviations from the baseline growth rate would increase the projected debt-to-GDP ratio. For every percent of GDP deviation from the baseline growth rate, the debt-to-GDP ratio on average would vary by approximately 14 percent in FY2027/28 and 24 percent in FY2033/34.¹⁶ A negative 1 percent of GDP growth deviation, ceteris paribus, would thus be enough to prevent the government from achieving its FY2027/28 and FY2033/34 debt targets. Based on these results, Figure 5.1 shows that the debt-to-GDP ratio in FY2033/34 could range between 48 percent in the high-growth scenario and 68 percent in the low-growth scenario.

¹⁴ The average growth for this period was 2.7 percent.

¹⁵ For consistency, we make use of the latest IMF WEO (October 2018) debt-to-GDP figures, including the estimate for debt after the restructuring of 123 percent as presented in the EFF document.

¹⁶ These figures assume constant GDP growth deviations ranging 1 percent -3 percent between 2019-2027 and 2019-2033 respectively.

Figure 5.2a: Deviations in the 2027 Debt-to-GDP Projection

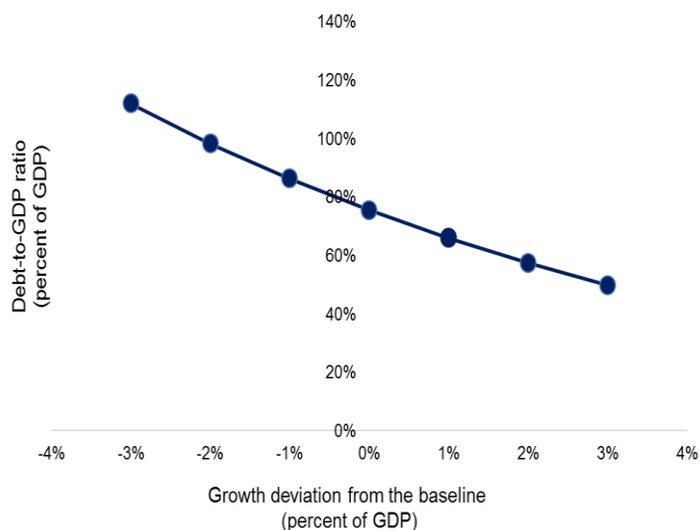
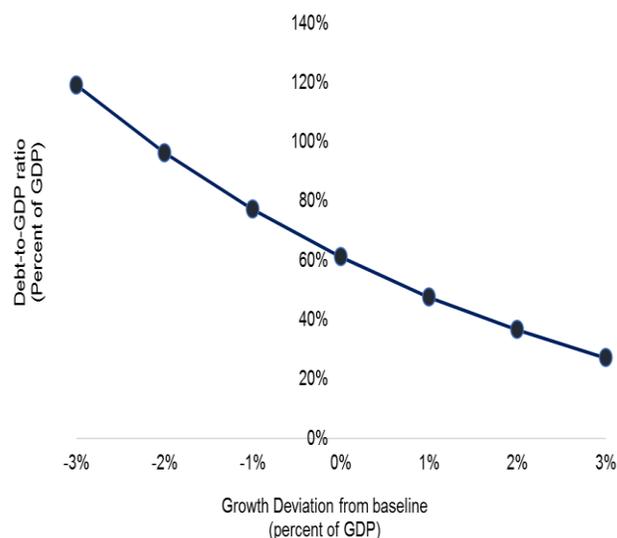


Figure 5.2b: Deviations in the 2033 Debt-to-GDP Projection



Source: IDB estimates based on data from the Central Bank of Barbados and WEO, IMF October 2018.

As previously discussed, changes in the real GDP growth rate will also have an effect on the required primary fiscal balance adjustment to reach the established debt targets. As presented in Figures 5.3a and 5.3b, negative growth deviations in the baseline scenario would result in a higher required fiscal balance to achieve debt targets in FY2027/28 and FY2033/34. Based on our estimates for every percent of GDP deviation from the baseline growth rate, the required primary fiscal surplus to reach the established debt targets for FY2027/28 and FY2033/34 would change on average by 10 percent of GDP.¹⁷ As seen in Table 5.1, in order to reach the 2033 debt target, based on the low- and high-growth scenarios modelled in this section, the required average fiscal balance would range between 4.1 and 5.4 percent depending on the growth assumptions used.¹⁸

Although the simulated projections show the minimum required primary fiscal surplus to achieve the debt target set by the government, it would be prudent to have a higher primary surplus to shield the economy from potential economic shocks, particularly given the vulnerability of Barbados to the world economy due to higher international oil prices, higher U.S. interest rates, the economic slowdown in partner markets such as the United Kingdom, United States, and Canada and political uncertainties in these and other countries in the region.

¹⁷ These figures estimate recurring GDP growth deviations ranging 1 percent -3 percent between 2019 and 2027 and 2019 and 2033, respectively. Deviations in the required primary fiscal balance range from an average 10.9 percent in 2027 to 10 percent in 2033.

¹⁸ These figures refer to the average required fiscal balance for the periods 2019-2027 and 2019-2033 respectively. The calculations assume a ceteris paribus scenario with a constant fiscal balance during the period of analysis.

Figure 5.3a: Required Primary Surplus to Reach 80 percent of GDP by 2027 under Different Growth Assumptions

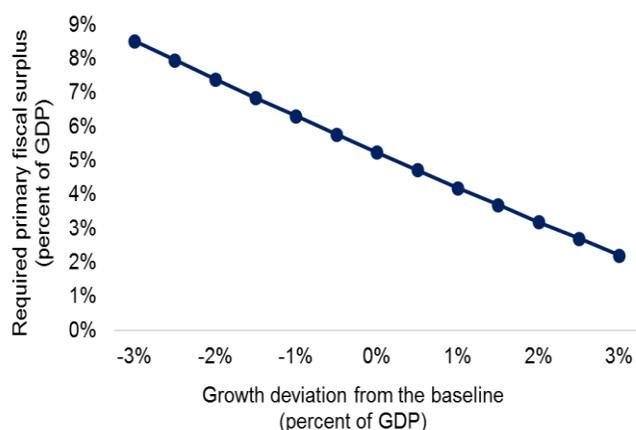


Figure 5.3b: Required Primary Surplus to Reach 60 percent of GDP by 2033 under Different Growth Assumptions

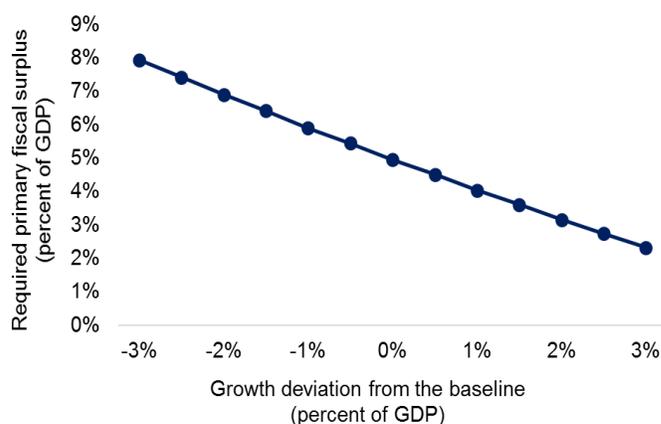


Table 5.1: Required Primary Fiscal Surplus (PFS) under Different Growth Scenarios

	PFS required to achieve 2027 debt target	PFS required to achieve 2033 debt target
High-growth scenario	3.5%	4.1%
Baseline	4.9%	5.0%
Low-growth scenario	5.5%	5.4%

Source: IDB estimates based on data from the Central Bank of Barbados and WEO, IMF October 2018.

The simulations presented in this section clearly show that the level of GDP growth impacts both the forecast debt-to-GDP ratio and the required fiscal adjustment to meet debt targets. Ensuring that growth-enhancing measures are included as part of the fiscal adjustment program will be important during the next few years in Barbados. However, the results presented in this section ought to be taken with caution, as the shocks simulated in this analysis isolate the specific effect of each variable of interest. They do not model feedback effects between variables, nor do they account for additional externalities that the modelled variables might have on other aspects of the economy. Future analysis should strive to incorporate feedback mechanisms between growth, debt, and the primary fiscal surplus, as well as the effect of other variables of the law of motion of debt into the analysis.

6. Conclusion

Barbados's high debt-to-GDP ratio stems from decades of low growth, which did not offset the rising financial burden stemming from recurring fiscal deficits and rapidly growing interest payments. The unsustainable debt trajectory has resulted in a low level of reserves and has led to an ambitious set of reforms, as laid out in the BERT program.

As discussed in this brief, positive economic growth along with a gradual adjustment to the fiscal surplus through a mix of expenditure and revenue-based measures should lead to a reduction in debt levels, in line with the government's debt targets. Based on the simulations, the debt-to-GDP

ratio is forecast to range between 48 and 68 percent of GDP in FY2033/34, depending on a high- and low-growth scenario. Moreover, negative deviations in real GDP growth, compared to the baseline scenario, would increase the projected debt-to-GDP ratio and require a higher primary fiscal surplus to achieve debt targets. A GDP growth deviation of -1 percent from the baseline growth rate could be enough to offset the government from reaching its debt objectives and undermine the consolidation effort.

These results indicate that promoting economic growth will be important to foster a sustainable fiscal consolidation strategy. Barbados's inherent structural weaknesses that limit economic growth will have to be tackled. These include a weak business climate, high dependence on imports and low levels of diversification, low competitiveness,¹⁹ and climate change and natural hazards. Barbados's weak business environment is reflective of a challenging regulatory climate with restraints to innovation, the presence of diseconomies of scale, and constraints in access to finance. According to the Doing Business Report 2019, Barbados ranked 129th out of 190 countries,²⁰ when compared with regional peers such as Jamaica (75th), St. Lucia (93rd), and Trinidad and Tobago (105th). Along with setting and committing to short-term reform measures that continue addressing the fiscal imbalances and elevated debt levels. In the medium to long term, efforts could include promoting growth-enhancing measures, including diversification of energy sources to reduce reliance on oil imports, reforming legal processes, reforming complex and bureaucratic government processes, and further investing in climate change adaptation and mitigation strategies (Giles Alvarez et al., 2018).

This analysis thus has implications for the design of the fiscal adjustment. Although progress has been made through recent fiscal tightening measures, Barbados is could face low growth rates over the short term. At the same time, the economy remains vulnerable to external shocks, particularly from extreme weather-related events, fluctuations in global commodity prices, and shocks to external partners in the tourism and financial services industries, namely in the United Kingdom, the United States, and Canada. However, a successful implementation of the proposed reforms, along with the support from international financial institutions, is anticipated to boost confidence and contribute to an improved outlook. Going forward, the government will have the difficult task of balancing fiscal consolidation with growth-enhancing measures to ensure successful reforms and return to sustainable debt levels.

¹⁹ Barbados ranked 72nd out of 138 countries on the World Economic Forum's 2016–2017 Global Competitiveness Index. The country's small market size, rigid labor laws, fiscal imbalances, and high trade tariffs were identified as key structural constraints to its competitiveness.

²⁰ The areas where Barbados scores worst are related to contract enforcement (170th), protection of minority investors (168th), dealing with construction permits (154th), access to credit (144th), cross-border trading (132nd), and registering a property (129th). Barbados' ranking and scorings in the Doing Business Report have been worsening. In the 2014 Doing Business Report, Barbados ranked 91st/189, above Jamaica (94th). World Bank Group (2019).

References

- Amo-Yartey, C., M. Narita, G. P. Nicholls, J. C. Okwuokei, A. Peter, and T. Turner-Jones. 2012. The Challenges of Fiscal Consolidation and Debt Reduction in the Caribbean. Working Paper, IMF. Washington, DC: IMF. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2192365f
- Baldacci, E., S. Gupta, and C. Mulas-Granados. 2013. Debt Reduction, Fiscal Adjustment, and Growth in Credit-Constrained Economies. Working Paper, IMF. Washington, DC: IMF. Available at: <https://www.imf.org/external/pubs/ft/wp/2013/wp13238.pdf>
- C.Tsibouris, G., M. A. Horton, M. J. Flanagan, and W. S. Maliszewski. 2006. Experience with Large Fiscal Adjustments. Washington, DC: IMF. Available at: <https://www.imf.org/external/pubs/nft/op/246/op246.pdf>
- Eyraud, L. and A. Weber. 2013. The Challenge of Debt Reduction during Fiscal Consolidation. Working Paper, IMF. Washington, DC: IMF. Available at: <https://www.imf.org/external/pubs/ft/wp/2013/wp1367.pdf>
- Giles Alvarez, L., J. P. Schmid, and K. Waithe. 2018. *Caribbean Region Quarterly Bulletin: 7(3): Barbados: September 2018*. Available at <https://publications.iadb.org/en/caribbean-region-quarterly-bulletin-volume-7-issue-3-september-2018>
- Greenidge, K., L. Drakes, and R. Craigwell. 2010. The External Public Debt in the Caribbean Community. *Journal of Policy Modeling*. 32(3): 418-431. Available at: <https://ideas.repec.org/a/eee/jpolmo/v32yi3p418-431.html>
- Greenidge, K., R. Craigwell, C. Thomas, and L. Drakes. 2012. Threshold Effects of Sovereign Debt: Evidence from the Caribbean. Working Paper, IMF. Washington, DC: IMF. Available at: <https://www.imf.org/external/pubs/ft/wp/2012/wp12157.pdf>
- IMF. 2014. External Debt Statistics - Guide for Compilers and Users. Washington DC: IMF. Available at: <http://www.tffs.org/pdf/edsg/ft2014.pdf>
- IMF. 2003. "Public Debt in Emerging Markets: is it Too High?" World Economic Outlook.
- Sahay, R. 2005. Stabilization, Debt, and Fiscal Policy in the Caribbean. Working Paper, IMF. Washington, DC: IMF. Available at: <https://www.imf.org/external/pubs/ft/wp/2005/wp0526.pdf>
- Schmid, J. P. and X. Malcolm. 2016. Debt, Fiscal Adjustment, and Economic Growth in Jamaica. IDB Policy Brief No. IDB-PB-249. Washington, DC: Inter-American Development Bank. Available at: <https://docplayer.net/23585552-Debt-fiscal-adjustment-and-economic-growth-in-jamaica.html>
- Vegh, C. A., et al. 2018. Fiscal Adjustment in Latin America and the Caribbean: Short-Run Pain, Long-Run Gain?. LAC Semiannual Report; April 2018. Washington, DC: World Bank. Available at: <http://hdl.handle.net/10986/29666>
- Wright, A. and K. Grenade. 2014. Determining Optimal Public Debt and Debt-Growth Dynamics in the Caribbean. Las Vegas, NV: Macrothink Institute. Available at: <http://www.macrothink.org/journal/index.php/rae/article/view/5577>
- World Bank Group. 2019. Doing Business Report, 2019. Washington DC: World Bank. Available at: http://www.worldbank.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2019-report_web-version.pdf